

WHAT IS CLAIMED IS:

3ND A27
1. A method for selective call blocking in a communications network during an access overload condition:

detecting a plurality of simultaneous access requests from a plurality of mobile terminals, wherein the number of access requests exceeds capacity of a portion of the communications network, and

transmitting to the plurality of mobile terminals a message indicating a subset of the plurality of mobile terminals, the mobile terminals in the subset being prevented from accessing the network.

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2. The method of claim 1 further comprising selecting the subset based on call type.

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3. The method of claim 2 further comprising selecting the subset based on a classification of the mobile terminals.

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4. The method of claim 3 further comprising determining the classification from unique identification numbers of the mobile terminals.

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5. The method of claim 1 further comprising indicating in the message whether emergency calls are prevented from accessing the network.

6. A method for selective call blocking in a cell site during access overload conditions:

detecting at a base station a plurality of simultaneous access requests from a plurality of mobile terminals, the number of access requests exceeding the remaining capacity of the base station, and

dynamically adjusting and transmitting from the base station to all mobiles requesting service a subset of access overload classes until the number of mobiles requesting service falls to a level within the base station capacity.

7. The method of claim 6 wherein each mobile terminal has an access overload class associated therewith.

8. The method of claim 7 wherein each mobile having its access overload class in the subset received from the base station is blocked from accessing the base station.

9. The method of claim 8 wherein the step of adjusting involves randomly selecting elements of the subset from all the possible access overload classes.

10. A method for selective call blocking in a cell site during access overload conditions:

detecting at a base station a plurality of simultaneous access requests from a plurality of mobile terminals each requesting access for one of a plurality of call types, the number of access requests exceeding the remaining capacity of the base station, and

dynamically adjusting for each call type and transmitting from the base station to all mobiles requesting service a subset of access overload classes for each call type until the number of mobiles requesting service falls to a level within the base station capacity.

11. The method of claim 10 wherein each mobile terminal has an access overload class associated therewith.

12. The method of claim 11 wherein each mobile having its access overload class in the subset received from the base station is blocked from accessing the base station.

13. The method of claim 10 wherein the step of adjusting involves randomly selecting elements of the subset from all the possible access overload classes.

14. A method for selective call blocking in a cell site during access overload conditions:

detecting at a base station a plurality of simultaneous access requests from a plurality of mobile terminals each

requesting access for one of a plurality of call types or service option groups, the number of access requests exceeding the remaining capacity of the base station, and

dynamically adjusting for each call type or service option group and transmitting from the base station to all mobiles requesting service a subset of access overload classes for each call type or service option group until the number of mobiles requesting service falls to a level within the base station capacity.

15. The method of claim 14 wherein each mobile terminal has an access overload class associated therewith.

16. The method of claim 15 wherein each mobile having its access overload class in the subset received from the base station is blocked from accessing the base station.

17. The method of claim 14 wherein the step of adjusting involves randomly selecting elements of the subset from all the possible access overload classes.

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18. A node in a communications network, wherein the node has instructions for:

detecting a plurality of simultaneous access requests from a plurality of mobile terminals, wherein the number of access requests exceeds capacity of a portion of the communications network, and

transmitting to the plurality mobile terminals a message indicating a subset of the plurality of mobile terminals, the mobile terminals in the subset being prevented from accessing the network.

19. The node of claim 18 wherein the node has additional instructions for selecting the subset based on call type.

21. The node of claim 19 wherein the node has additional instructions for selecting the subset based on a classification of the mobile terminals.

22. The node of claim 20 wherein the node has additional instructions for determining the classification from unique identification numbers of the mobile terminals.

23. The node of claim 18 wherein the node has additional instructions for indicating in the message whether emergency calls are prevented from accessing the network.

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24. A communications device comprising:

a processor,

a radio transceiver coupled to the processor,

a memory coupled to the processor, wherein the memory contains instructions for:

periodically receiving an access control message, and

determining whether the mobile communications device is subject to the access control message, if yes, then storing indicators in the memory for later use.

25. The communications device of claim 24 further comprising instructions for

receiving a send command to initiate a call session, and

determining from the indicators whether the send command is subject to the access control message, if yes, then stopping the call session.

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26. The communications device of claim 24 wherein the determining instruction further comprises:

(a) reading a service indicated by the access control message,

(b) reading a class associated with the service,

(c) determining if the mobile communications device is a member of the class, if yes, then storing an indicator associated with the service,

(d) repeating steps a through c for each service contained in the access control message.

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Cont.

27. The communications device of claim 26 wherein step (c) further comprises determining if the mobile communications device is a member of the class using a unique identity number associated with the mobile communications device.

28. The communications device of claim 26 wherein the instructions further comprises:

receiving a send command to initiate a call session, determining the service associated with the send command, determining from indicators if the service associated with the send command is subject to the access control message, if yes, then stopping the call.

29. The communications device of claim 24 wherein the instructions further comprises reading at least one emergency parameter in the access control message.

30. The communications device of claim 28 wherein the instructions further comprises determining if the call session is an emergency call, if the call session is an emergency call, then determining whether the at least one emergency parameter indicates whether the emergency call is subject to the access control message, if yes, than stopping the call session.

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